

**ABSTRACT****A Polynucleotide Motor, a Motor System, their  
Preparation and Uses**

5 A polynucleotide motor is disclosed, comprising an enzyme  
capable of binding to a nucleic acid sequence, which  
enzyme is also capable of translocating the nucleic acid  
sequence without causing cleavage thereof. The motor may  
be associated with a substance bound to the nucleic acid  
10 sequence so that the bound substance, such as a magnetic  
bead, biotin, streptavidin, a scintillant or the like,  
can itself be translocated, relative to the region of  
binding of the enzyme, during translocation. Such a  
system has applications in the screening or testing for  
a pre-determined biological, chemical or physical  
15 activity; for example, in screening for new  
pharmacologically-effective ligands.